

# **EXHIBIT 1**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Attorney Docket No. 26.0.3.235/A

In re Patent of: )  
Richard D. Bednar )  
Patent No. 6,047,530 )  
Issued April 11, 2000 )  
For GANG-TYPE ROTARY LAWN )  
MOWER WITH REAR ROLLER )

**DETAILED REQUEST FOR EX PARTE PATENT REEXAMINATION**

Mail Stop *Ex parte* Reexam  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Pursuant to 37 CFR 1.510, The Toro Company, the real party in interest and a third party requester, hereby requests *ex parte* reexamination of U.S. Patent 6,047,530. A Request for *Ex parte* Reexamination Transmittal Form (PTO/SB/57) is attached hereto.

The 530 patent is currently involved in patent litigation entitled Textron Innovations Inc. v The Toro Company in the United States District Court for the District of Delaware, Civil Action No. 05-486 (GMS). A *Markman* hearing was held and the Court issued an Order Construing The Terms Of U.S. Patent Nos. 6,047,530; 6,336,311; and 6,336,312 on October 20, 2006. A copy of this Order is attached hereto. The case is currently scheduled for trial on June 25, 2007.

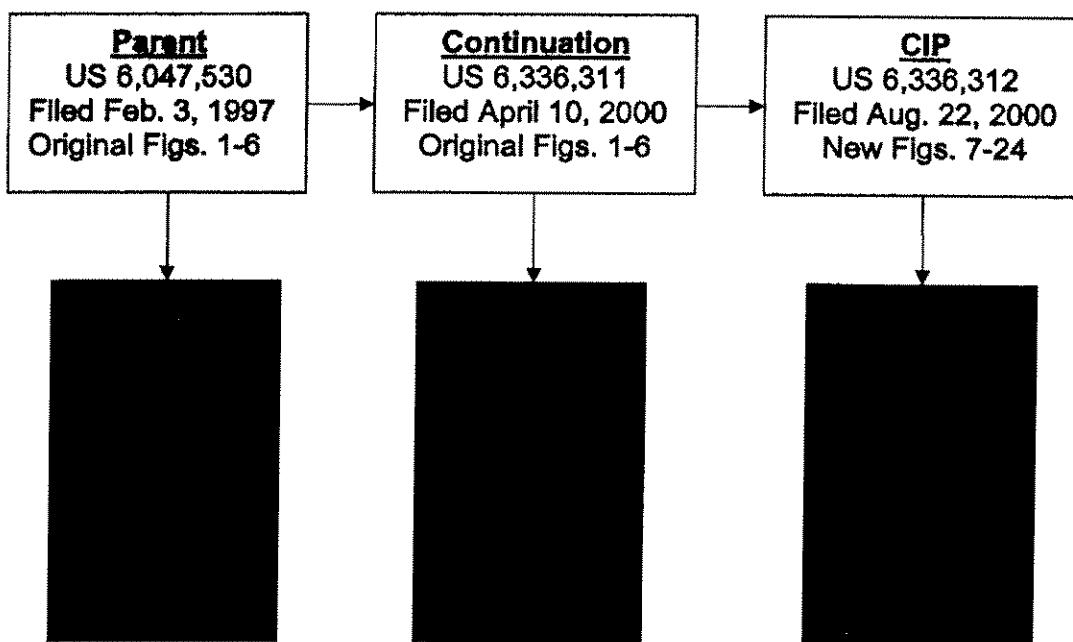
Toro requests that claims 1-5 of the 530 patent be reexamined. These are the same claims of the 530 patent that have been asserted against various Toro products in the above-identified litigation.

The basis for this request is the presence of substantial new questions of patentability as detailed hereafter in this Request. Toro will apply this prior art to

the claims of the 530 patent in a manner consistent with the claim construction set forth in the Court's Order regarding claim construction.

#### Identification of Related Patents and Reexaminations

As is apparent from the three patents contained in the Title to the Court's claim construction Order, there are three patents at issue between Textron and Toro in the pending litigation. All three patents deal with a gang rotary lawn mower. **Individual Reexamination Requests of each patent are being filed simultaneously in the PTO.** The patents, Reexamination Requests, and claims in each patent for which reexamination is requested are identified in the flowchart below:

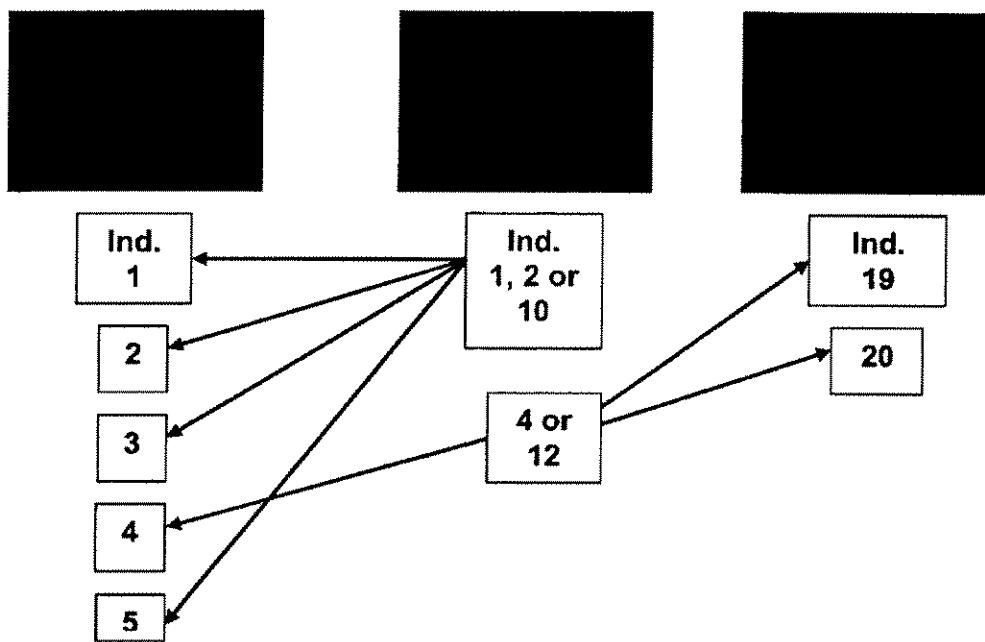


The claims at issue in the patents are all directed to gang mowers equipped with particular rotary cutting deck assemblies. The Reexamination Requests themselves will explore this art in detail in showing why substantial new questions of patentability exist with respect to those claims in each patent for which reexamination is requested. Toro is requesting reexamination of all the claims in each patent that have been asserted against it in the related litigation.

The 530 and 311 patents have identical disclosures and are related to one another as parent – continuation. As is not surprising, the claims of the 530 and 311 patents are closely related. In fact, their claims are so close that some of the prior art that serves as the basis for unpatentability of some claims in the 311 patent **will apply with equal force to all the claims** at issue in the 530 patent.

The 312 patent has claims directed to subject matter that was newly added as of the August 22, 2000 filing date of the 312 patent. Thus, new or additional prior art combinations are set forth in the Reexamination Request of the 312 patent to address the different questions of patentability raised by many of the claims of the 312 patent. However, **two claims** in the 312 patent are unpatentable based on some of the same prior art combinations set forth with respect to certain similar claims in the 311 patent.

Thus, the Reexamination Request in the 311 patent serves as a useful starting point in considering the reexamination of all three patents because the art applied to certain claims in the 311 patent flows out to reach all the claims in the 530 patent and two of the claims in the 312 patent. This is graphically demonstrated in the following chart:



I do not mean to say that independent claims 1, 2 or 10 of the 311 patent have exactly the same limitations as the claims in the 530 patent to which the arrows are directed or that dependent claims 4 or 12 of the 311 patent have exactly the same limitations as claim 4 in the 530 patent or claims 19 and 20 in the 312 patent. What I am saying is that at least some of the prior art applied in the 311 Reexamination Request to reject independent claims 1, 2 or 10 and dependent claims 4 or 12 of the 311 patent has structure that meets all of the limitations or features set forth in the claims in the other two patents to which the arrows are directed.

**The Appendix from the Reexamination Request of the 311 Patent**

The Reexamination Request in the 311 Patent contains an extensive background, description of prior art, and application of prior art in the section of the Request entitled "Detailed Explanation of the Pertinency and Manner of Applying the Patents and Printed Publications to Every Claim of the 311 Patent for Which Reexamination Is Requested". This section has various subsections thereof entitled:

- **General Background;**
- **Background Relating to Gang Mower Configurations;**
- **The Court's Claim Construction Applicable to Claim 1 of the 311 Patent;**
- **Background Relating to the Mower Traction Unit and Cutting Unit Support;**
- **The Rotary Gang Mower Disclosed in the 311 Patent;**
- **Introduction to the Rotary Gang Teachings;**
- **Detailed Explanation of the Rear Roller Teachings;**
- **Detailed Explanation of the Height of Cut (HOC) Teachings;**
- **Detailed Explanation of the Single Spindle Teachings;**
- **Detailed Explanation and Application of the Rotary Gang Teachings;**
  - **The Middlesworth 72 RR;**
  - **The Risboro RTS Rotary Cutters;**
  - **The Nunes 355 Rotary Mower;**
  - **The Lesco 500D Rotary Mower;**
- **Alternative Ways to Combine the Prior Art;**
  - **The Ransomes Boom Mower;**
  - **The Wulff Rotary Mower; and**

- **Summary.**

The reader of this Reexamination Request desirably should read and become familiar with the above material from the Reexamination Request of the 311 patent. Some familiarity with this material is presumed by the author hereof when it comes to the discussion of the substantial new questions of patentability at issue in this Reexamination Request relating to the 530 patent.

If the reader of this Reexamination Request has not yet read this material in the Reexamination Request of the 311 patent, then he or she should do so now. In case this material is not available to the reader of this Reexamination Request, all of this material from the Reexamination Request of the 311 patent is attached as an Appendix to this Reexamination Request. The Appendix contains the entire section from the Reexamination Request of the 311 patent entitled "Detailed Explanation of the Pertinency and Manner of Applying the Patents and Printed Publications to Every Claim of the 311 Patent for Which Reexamination is Requested", including all of the various subsections thereof as listed above. The attached Appendix comprises pages 10-52 of the Reexamination Request of the 311 patent.

**Patents and Printed Publications Relied Upon In This Request**

Toro will rely upon the list of patents and printed publications that are described and referenced in the Reexamination Request of the 311 patent. Rather than copy this list from the Reexamination Request of the 311 patent into the body of this Request, the patents and printed publications submitted to the PTO in conjunction with the Reexamination Request of the 311 patent have simply been listed on the attached Forms PTO 1449. Copies of each patent and printed publication used in conjunction with the Reexamination Request of the 311 patent are, of course, attached as well hereto. No additional patents or printed publications will be relied upon in this Request.

**Statement Pointing Out Each Substantial New Question of Patentability**

The following chart sets forth the claims for which reexamination is requested and shows the substantial new questions of patentability posed by the prior art references listed atop the various columns of the chart. The references listed atop the various columns of the chart can be applied to the claims under 35 USC 103.

All of the references applied to the claims of the 530 patent, including the references relied upon under 35 USC 103 to supply various teachings, such as the Single Spindle Teachings, the Rear Roller Teachings, the Height of Cut (HOC) Teachings, Mitchell and the Middlesworth 72R, are not of record in the

prosecution of the 530 patent. Accordingly, they obviously raise substantial new questions of patentability.

The Nunes 355 Rotary Mower brochure was submitted to the PTO very late in the prosecution of the 530 patent, but its submission did not meet all the requirements needed for consideration by the Examiner at that late stage of the prosecution. Thus, the Examiner specifically noted that the Nunes 355 Rotary Mower brochure had not been considered.

In any event, the claim chart showing all the substantial new questions of patentability follows:

530 Patent Claim	Risboro RTS Rotary Cutters	Nunes 355 Rotary Mower	Lesco 500D Rotary Mower	Ransomes Boom Mower	Wulff Rotary Mower
1	103  (as applied to claim 1 of 311 patent)  obvious in view of Single Spindle Teachings	103  (as applied to claim 1 of 311 patent)  obvious in view of Mitchell and Middlesworth 72R; and  (as applied to claims 2 or 10 of 311 patent)  further obvious in view of Rear Roller Teachings	103  (as applied to claim 1 of 311 patent)  obvious in view of Mitchell and Middlesworth 72R ;and  (as applied to claims 2 or 10 of 311 patent)  further obvious in view of Rear Roller Teachings	103  (as applied to claims 1, 2 or 10 of 311 patent)  obvious in view of Rotary Gang Teachings	103  (as applied to claim 1 of 311 patent)  obvious in view of Single Spindle Teachings; and  obvious to mount on any gang mower, e.g. Ransomes 250 Mower
2	103	103	103	103	103
3	103	103	103	103	103

4	103  (as applied to claims 4 or 12 of 311 patent)  further obvious in view of HOC Teachings	103  (as applied to claims 4 or 12 of 311 patent)  further obvious in view of HOC Teachings	103  (as applied to claims 4 or 12 of 311 patent)  further obvious in view of HOC Teachings	103  (as applied to claims 4 or 12 of 311 patent)  further obvious in view of HOC Teachings	103  (as applied to claims 4 or 12 of 311 patent)  further obvious in view of HOC Teachings
5	103	103	103	103 obvious to use hydraulic motor	103

**Detailed Explanation of the Pertinency and Manner of Applying the Patents and Printed Publications to Every Claim of the 530 Patent for Which Reexamination Is Requested**

**Relationship Between the Claims of the 530 and 311 Patents**

The claims of the 530 patent and the 311 patent are so close and intertwined with one another that they are barely separable. One way to understand them is to go back for a moment to a summary I provided in the Reexamination Request of the 311 patent of various features of the cutting deck assemblies disclosed in the 530 and 311 patents. Let me lift out that portion of the Reexamination Request of the 311 patent, namely:

**"In the gang mower of the 311 patent, each rotary cutting deck assembly has the following features:**

1. the deck is partially supported for rolling over the ground by a rear roller that extends "substantially across the entire width of said deck" (Claim 2 of the 311 patent) or that extends "substantially across the entire width of said cutting path" (Claim 10 of the 311 patent) ;
2. the height of cut is adjusted by moving the cutting deck up and down relative to a pair of side plates that carried a pair of front wheels at one end and the aforementioned rear roller at the opposite end; and

3. the deck assembly has a single spindle for mounting at least one cutting blade."

(Page 20 of the Reexamination Request of the 311 patent.)

These features appear in the claims of the 530 and 311 patents in somewhat different ways. For example, focusing just on the three features noted above and ignoring, for the moment, other claim limitations, the features appear in the following combinations in the claims of the two patents:

<u>530 Patent Claims</u>	<u>311 Patent Claims</u>
<u>Independent Claim 1</u>  Single Spindle and Roller "extending substantially across the entire width of said deck"	<u>Independent Claim 1</u>  Single Spindle
	<u>Independent Claim 2</u>  Roller "extending substantially across the entire width of said deck"
<u>Dependent Claim 4</u>  Height of Cut (side plates, front wheels, rear roller)	<u>Dependent Claim 4</u>  Height of Cut (side plates, front wheels, rear roller)
	<u>Independent Claim 10</u>  Roller "extending substantially across the entire width of said cutting path"
	<u>Dependent Claim 12</u>  Height of Cut (side plates, front wheels, rear roller)

As one can see, there is no claim in the 311 patent that simultaneously recites both a single spindled rotary cutting deck assembly and the recited roller.

That is done only in claim 1 of the 530 patent. Thus, at least in this respect, claim 1 of the 530 patent is narrower than the claims in the 311 patent. This may affect somewhat the basis for how the art is applied, but not the fact that **the art combinations set forth in the Reexamination Request of the 311 patent have all the content they need to reach back and similarly render unpatentable the very similar claims found in the 530 patent.** Essentially, if the PTO accepts the art combinations offered against the claims in the 311 patent, then the claims of the 530 patent will also fall.

As an example of what I mean, the Risboro RTS Rotary Cutters can be applied under 35 USC 102 to claims 2 and 10 of the 311 patent. But, the Risboro RTS Rotary Cutters are not single spindled cutting deck assemblies as set forth in claim 1 of the 530 patent. However, claim 1 of the 311 patent is unpatentable under 35 USC 103 because it would have been obvious to one of ordinary skill in the art that the Risboro multi-spindled cutting deck assemblies could have been single spindled cutting deck assemblies. In fact, this combination had to be made to reach the one single spindled claim that was present in the 311 patent, namely claim 1 of the 311 patent. Thus, using just that one modification as used against claim 1 of the 311 patent, Risboro also fully meets claim 1 of the 530 patent (along with all the subject matter found in dependent claims 2, 3 and 5 of the 530 patent).

#### Applying the Prior Art to the Claims of the 530 Patent

I am going to be applying five primary references against claims 1-5 of the 530 patent. These references are the following and the first three come from a group that was called the Rotary Gang Teachings in the Reexamination Request of the 311 patent:

- Risboro RTS Rotary Cutters;
- Nunes 355 Rotary Mower;
- Lesco 500D Rotary Mower;
- Ransomes Boom Mower; and
- Wulff Rotary Mower.

This art will be applied to claims 1-5 of the 530 patent under 35 USC 103. Some of the teachings for doing so comprise some secondary references found in the following three categories:

- The Rear Roller Teachings;
- The Height of Cut Teachings;

- The Single Spindle Teachings.

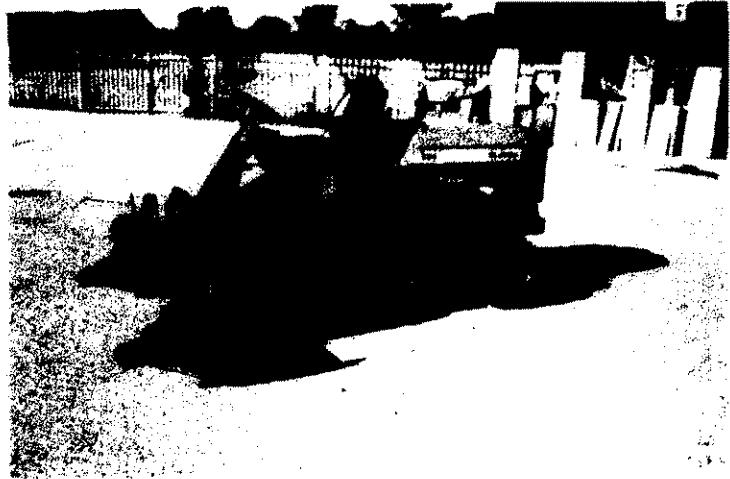
Other teaching references involve some of the Rotary Gang Teachings, Mitchell and the Middlesworth 72.

Now, the disclosures of all these references, both the primary references and the secondary or teaching references were extensively summarized in the Reexamination Request of the 311 patent. Again, if the reader of this Request has read the Reexamination Request of the 311 patent, he or she will know what I am talking about. If not, all of this material is in the Appendix to this Request.

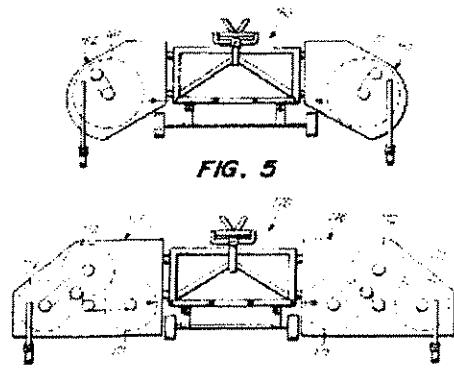
It is not really necessary to go through all of this material again in this Reexamination Request if the reader hereof is familiar with this material. Thus, rather than burden this Request with unnecessary repetition, I will not repeat all this material in the same detail. The detail is available in the Appendix.

Instead, as to each of the primary references, I will simply do a few snapshots from the Reexamination Request of the 311 patent to jog the reader's memory.

- Risboro RTS Rotary Cutters



spindle, rather than three, as suggested by the Single Spindle Teachings.



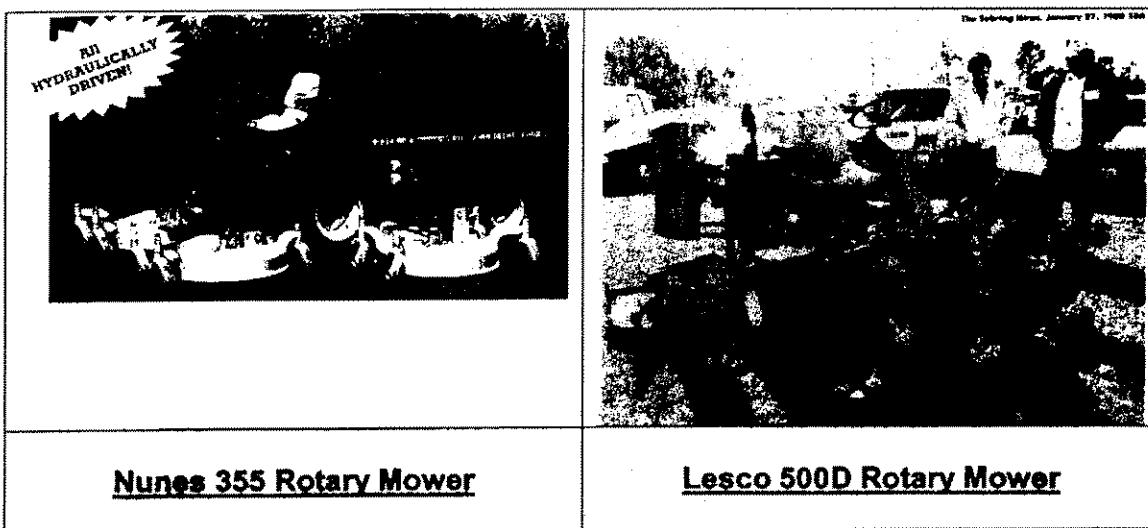
Remember Risboro. This is a triplex gang mower with three rotary cutting deck assemblies in the gang configuration claimed in claims 1 and 2 of the 530 patent, but the deck assemblies have three spindles and thus are not single spindled. It would have been obvious under 35 USC 103 to make the deck assemblies with just one

One of the Single Spindle Teachings is Torras. Here are Figs. 5 and 6 from Torras. Torras discloses a single spindle alternative in Fig. 5 for the three spindle arrangement in Fig. 6.

When the single spindle change is made to Risboro, then Risboro reads on claims 1, 2, 3 and 5 of the 530 patent. I'll treat claim 4 of the 530 patent vis a vis Risboro a bit later.

- **Nunes 355 Rotary Mower and Lesco 500D Rotary Mower**

The art combinations and patentability issues raised by the Nunes and Lesco Rotary Mowers are the same. They will be treated together in this section. I am going to reproduce my illustrations of these two mowers from the Reexamination Request of the 311 patent.



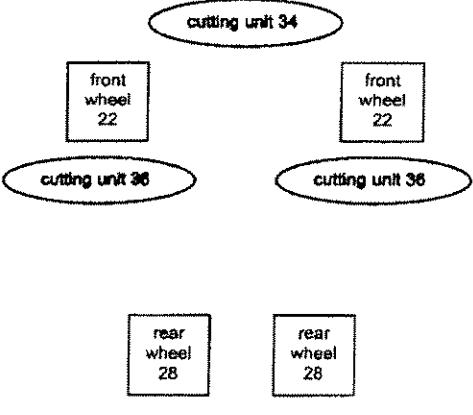
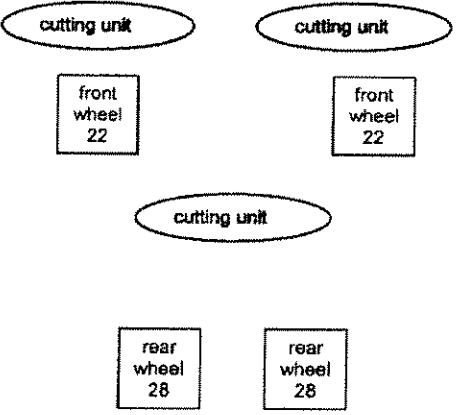
Remember that Nunes and Lesco are fiveplex gangs of single spindled rotary cutting deck assemblies. Thus, unlike Risboro which was a multi-spindled mower, no modification is needed to Nunes and Lesco to meet the single spindled limitation of claim 1 of the 530 patent.

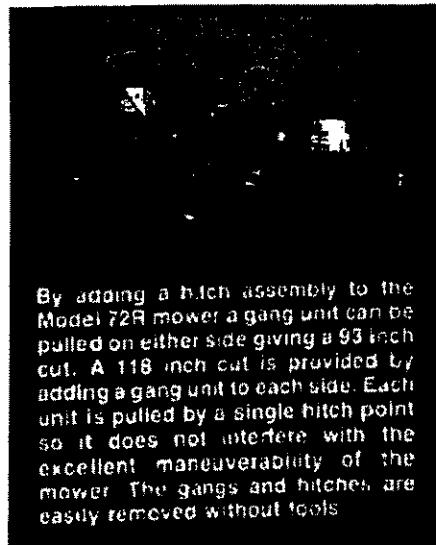
#### The Modification Needed for the Gang Arrangement

The cutting deck assemblies in Nunes and Lesco were arranged in a 2 – 3 combination (two outfront cutting deck assemblies and three trailing cutting deck assemblies). The Court has construed the language in the claims of the patents at issue, including claim 1 of the 530 patent, to exclude the 2 – 3 arrangement of a fiveplex (or a 1 – 2 arrangement in a triplex) in which there are fewer cutting deck assemblies in the front row than in the rear row. In reading the claims of the 530 patent upon various Toro products in the related litigation, Textron has applied the claims to various Toro products in which the cutting deck assemblies are arranged in a 2 – 3 arrangement like that shown in Nunes or Lesco. If Toro were to take the same liberties in this Request, then there would be no need to make the gang arrangement modification I am about to make. However, Toro will follow the Court's claim construction on this issue.

One thing that is clear about the gang mower art is that the art arranged the cutting deck assemblies in gang mowers in a number of very well known gang configurations. In addition to the 2 – 3 fiveplex shown above (or a 1 – 2 triplex), the upfront and rear rows of cutting deck assemblies were often flip flopped so that a 2 – 3 fiveplex could become a 3 – 2 fiveplex (or a 1 – 2 triplex could become a 2 – 1 triplex). Essentially the front and rear rows of cutting deck assemblies reverse their positions. In these flip flopped arrangements, the number of cutting deck assemblies in the front row is greater than the number of cutting deck assemblies in the rear row so that the each rear cutting deck assembly now covers a gap between two adjacent front cutting deck assemblies. This arrangement meets the Court's claim construction.

The flip flopping in cutting deck assemblies in this manner is expressly taught by Mitchell, an old Ransomes patent. Remember that Mitchell expressly teaches the following two gang configurations:

	
<p><b>The 1 – 2 arrangement as shown in Figs. 1 and 2 of Mitchell.</b></p>	<p><b>The flip flopped 2 – 1 arrangement described as the third alternate in Mitchell at Col. 4, Line 64 – Col. 5, Line 5. Note the front and rear rows are simply reversed relative to the 1-2 arrangement shown to the left.</b></p>



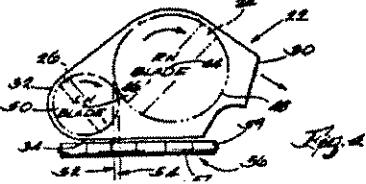
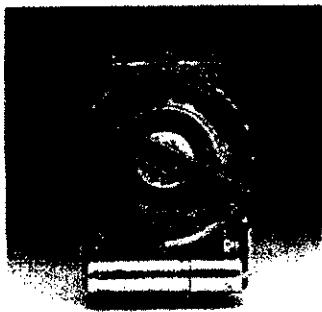
In addition, the art was also well aware of converting a 2 – 1 triplex into a 2 – 3 fiveplex simply by adding two units to the rear row on either side of the center unit, or conversely going back from a 2 – 3 fiveplex to a 2 -1 triplex by removing the two outside units on the rear row. Remember again that this is expressly taught in conjunction with the Middlesworth 72R. See the relevant disclosure to the left where a 2 – 1 triplex has been converted to a 2 – 3 fiveplex by adding two units to the rear row (the units with the white motors on top).

Thus, to meet the Court's claim construction relating to the gang arrangement, it would have been obvious under 35 USC 103

to one of ordinary skill in the art that the Nunes and Lesco rotary mowers could be arranged either as a 3 – 2 fiveplex, by flip flopping the existing 2 – 3 configuration of Nunes or Lesco as taught by the flip flopping disclosed in Ransomes' own patent to Mitchell, or could be converted to a 2 – 1 triplex by deleting the outside two cutting deck assemblies in the rear row as taught by the Middlesworth 72R. The resulting 3 – 2 fiveplex configuration or 2 -1 triplex configuration meets the required placement of mowers according to the Court's claim construction

#### The Modification Needed for the Rear Roller

The other modification needed in Nunes and Lesco is the use of a rear roller on the cutting deck assemblies. Remember that the desire in the 530 patent was to provide better ground following to resist scalping and to permit the deck assemblies to stripe the grass. Remember again that the Rear Roller Teachings used in the Reexamination Request in the 311 patent teach that a rear roller is well known for doing this. Rear roller attachments were even sold for the purpose of making the conversion in a deck assembly having rear caster wheels. Let's go back to some of our prior art snapshots to recall these teachings.

 <p>"The full width roller bar 56, in turn, follows the exact contour of the ground over which the tractor 10 is travelling. This improves the uniformity of the final cut and avoids "scalping"..."</p>	 <p>"There's something for everyone: Rear Roller Models and 4 Wheels."</p> <p>"Thanks to the marvelous rear-roller there's no reason why every lawn shouldn't have a beautiful striped finish."</p>	 <p>"Kilworth's Sovema EMHZ 72 has an optional rear roller."</p> <p>The caption reads:</p> <p>"Kilworth's Sovema EMHZ 72 has an optional rear roller."</p> <p>The photo shows a rear roller in place of the pair of rear caster wheels on a rotary cutting deck assembly.</p>
<p><b>US 5,085,044 to Freier</b></p>	<p><b>"Honda Lawn and Garden Care" brochure</b></p>	<p><b>Kilworth Sovema</b></p>

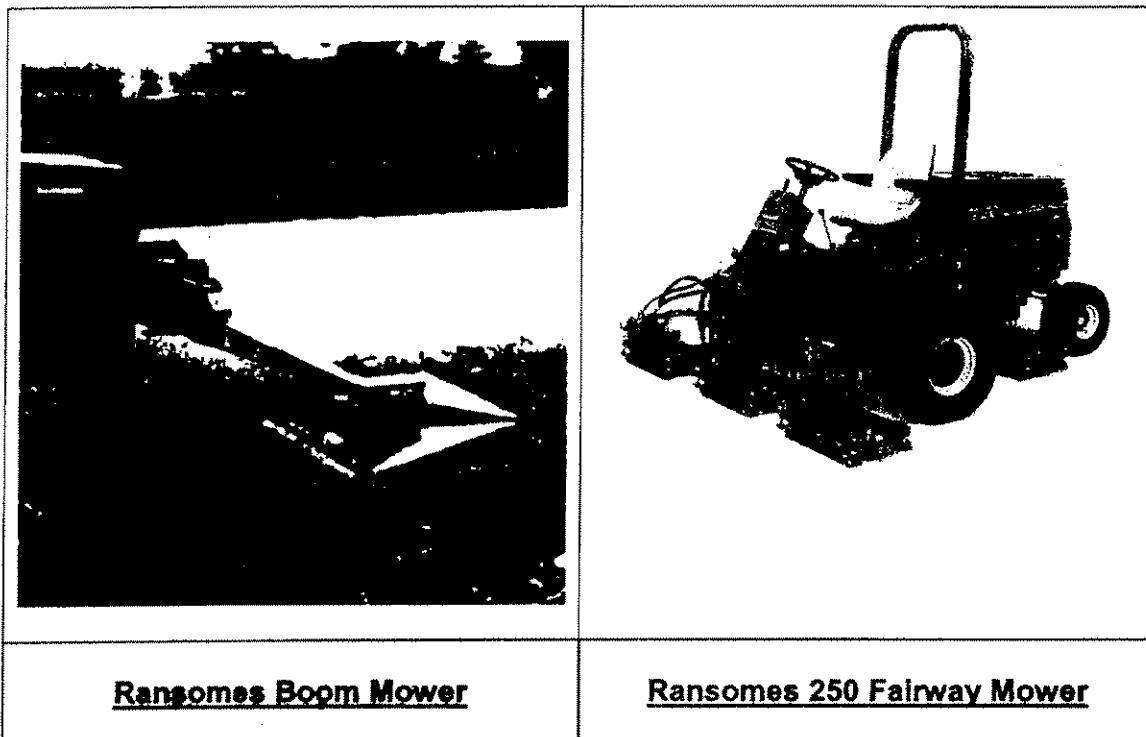
Nothing, and I repeat **NOTHING**, can be more obvious under 35 USC 103 to one of ordinary skill in the mower art than to use a rear roller at the rear of a cutting deck assembly for the same reasons done so by the inventors of the invention disclosed in the 530 patent – to provide better ground following and striping. Again, the reader is referred to the extensive discussion of this topic in the Reexamination Request of the 311 patent. But, the fact that it is obvious to use a rear roller is clear again from the excerpts of that discussion contained above. The art simply knew that a rear roller was used to improve ground following and thereby prevent scalping as well as to stripe the grass. Thus, when a rear roller is used on the rear of the Nunes/Lesco cutting deck assemblies, then either Nunes or Lesco reads on claims 1, 2, 3, and 5 of the 530 patent. Again, I will defer the discussion of claim 4 until later.

- Ransomes Boom Mower

Our trip down memory lane through the Reexamination Request of the 311 patent will continue with the Ransomes Boom Mower. This was a single spindled cutting deck assembly used by Ransomes to cut the grass on the sides of ditches. It was carried on a pivotal boom or lift arm. But, it was just one mower used on one traction unit – it was not used in a ganged arrangement as is claimed in the 530 patent.

Now the reader hereof must remember or be aware by now that gang mowers themselves were well known and were used to extend or widen the cutting swath provided by just one cutting deck assembly. Ransomes itself showed exactly the gang configuration at issue here on the vehicle as claimed in its 250 Fairway Mower – **but the 250 simply used reel cutting units and not single spindled rotary cutting deck assemblies.**

Again, let's go back and take another look at the Ransomes Boom Mower and the 250 Fairway Mower.



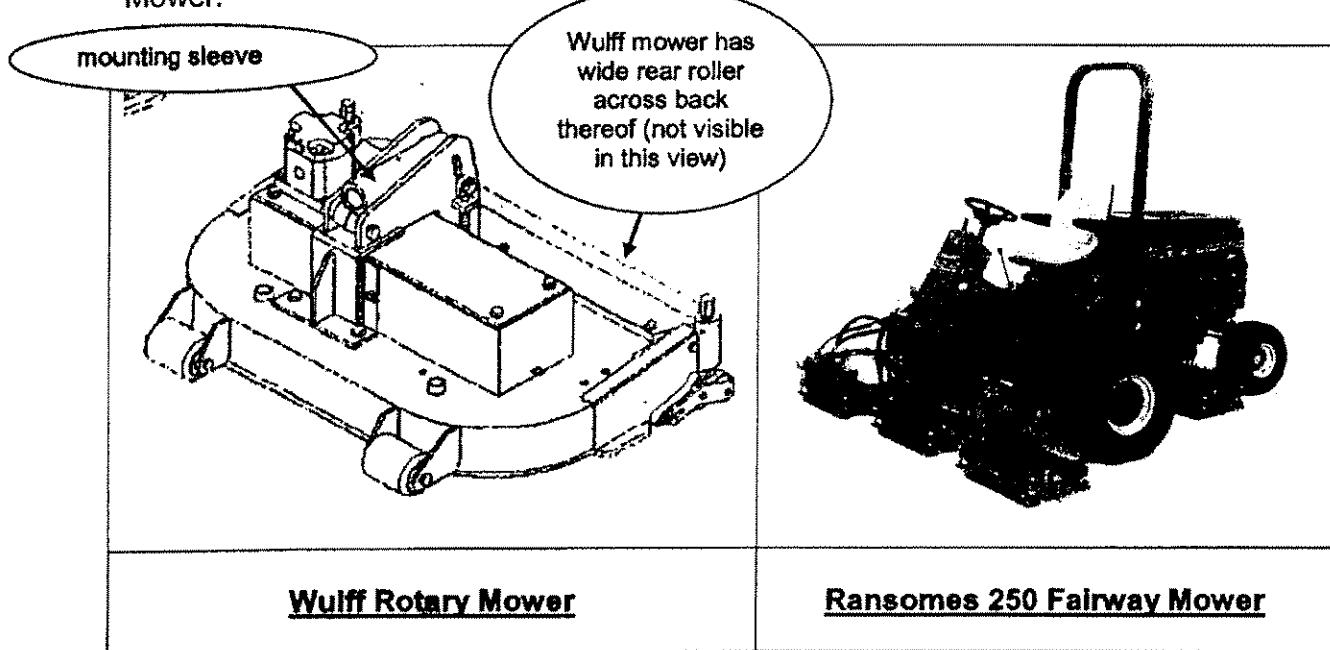
It would have been obvious under 35 USC 103 to one of ordinary skill in the art that the Ransomes Boom Mower could be used as a gang mower by using a plurality of Ransomes Boom Mowers in place of the cutting units on well known gang mowers such as the Ransomes 250 Fairway Mower or the other Rotary Gang Mowers described in the Reexamination Request of the 311 patent. When so modified, the Ransomes Boom Mower will read on claims 1-3 of the 530 patent.

Claim 5 is also unpatentable over the Ransomes Boom Mower as it would further have been obvious to change the mechanical drive on the Boom Mower to a hydraulic drive using an individual hydraulic motor on each Boom Mower. Individual hydraulic motors are well known in the mower art for driving cutting deck assemblies individually, as taught by Risboro, Nunes, and Lesco or even by

the traditional hydraulic motors used to individually power the reel cutting units on the Ransomes 250 Fairway Mower. Thus, with this additional modification, the Ransomes Boom Mower reads on claims 1-3 and 5 of the 530 patent. Again, I will defer the discussion of claim 4 until after I consider one more mower, the Wulff Rotary Mower.

- The Wulff Rotary Mower

The last set of photos we looked at above are just as helpful in examining the patentability issues raised by the Wulff Rotary Mower as they were respect to the Ransomes Boom Mower. Thus, I'm going to repeat the photos below – except that I will now replace the Ransomes Boom Mower with the Wulff Rotary Mower.



The reader will recall from the discussion of the Wulff Rotary Mower in connection with the Reexamination Request of the 311 patent that the Wulff Rotary Mower was designed precisely for the purpose of mounting on the lift arms of gang mowers. The fore-and-aft mounting sleeve, labeled above, allowed the Wulff Rotary Mower to be slipped onto a roll pin of the type often found on the front ends of the lift arms of gang mowers. The telescopic interconnection between the roll pin and the sleeve allowed the mower to roll about a fore-and-aft roll axis with the sleeve rotating clockwise or counter-clockwise on the roll axis defined by the roll pin. In fact, the Ransomes 250 Fairway Mower had just such a roll pin structure on the front of its cutting unit lift arms for mounting cutting units.

It would clearly have been obvious under 35 USC 103 to one of ordinary skill in the art to use the Wulff Rotary Mower on the lift arms of a gang mower.

**This was the raison d'etre for the Wulff Rotary Mower.** For example, one could simply slip off the five reel cutting units shown on the Ransomes 250 Fairway Mower and replace them with five Wulff Rotary Mowers. When so mounted, the Ransomes 250 Fairway Mower equipped with the Wulff Rotary Mowers would be a rotary gang mower carrying five rotary cutting deck assemblies each of which had a rear roller of the type recited in claim 1. In addition, when so mounted, the Wulff Rotary Mowers would be arranged in the precise gang configuration set forth in claim 1 of the 530 patent.

There is only one thing that would be lacking in this combination. The Wulff Rotary Mowers had two spindles – not one. However, as we saw above in conjunction with the Risboro RTS Rotary Cutters and as spelled out at length in the Reexamination Request of the 311 patent, there is no invention in simply changing a multi-spindled rotary deck assembly to a single-spindled deck assembly. The art teaches many single spindled mowers as set forth in the entire body of art identified as the Single Spindle Teachings. In addition, the Torras reference reviewed above specifically teaches changing a multi-spindled deck assembly to a single spindled deck assembly. Thus, it would have unquestionably been obvious under 35 USC 103 to simply use a single spindle in the Wulff Rotary Mower rather than two spindles.

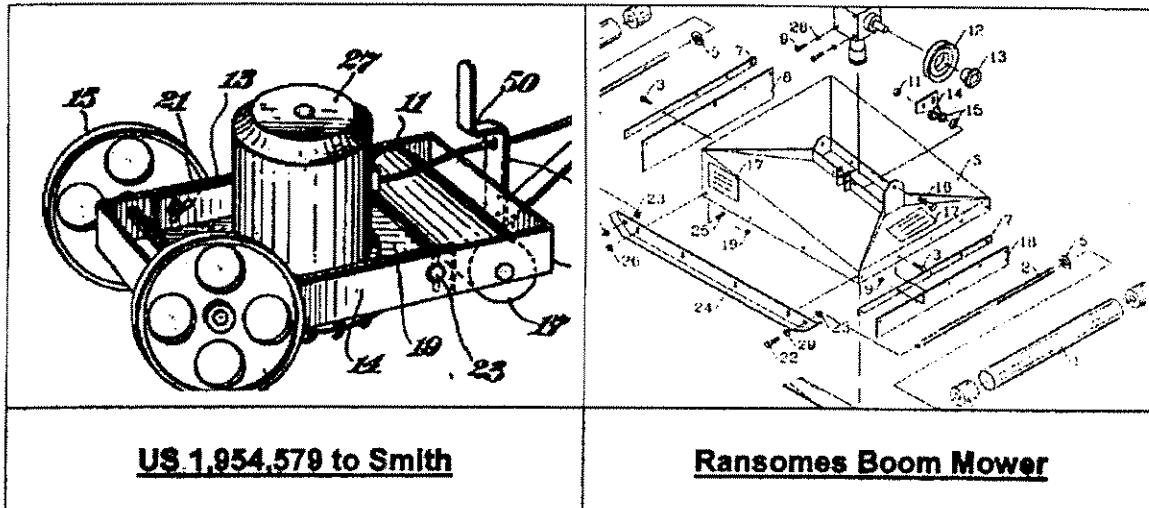
When Wulff is modified as set forth above, namely when it is converted into a single-spindled mower and when it is mounted on the lift arms of a gang mower **as it was designed to be mounted**, then the gang mower carrying such Wulff Rotary Mowers reads on claims 1-3 and 5 of the 530 patent.

Now, it's finally time to turn to a discussion of claim 4.

- **The Height of Cut Modification**

All of the modifications set forth above reach all the claims of the 530 patent but for claim 4 – namely the claim directed to the height of cut adjustment structure in the 530 patent. Again, the height of cut adjustment structure was all explained at length in the Reexamination Request of the 311 patent. The subject matter we are talking about is the use of a pair of side plates to carry the rear roller at the rear end of the side plates and a pair of front wheels at the front end of the side plates. The cutting height of the cutting deck is adjusted by sliding the cutting deck up and down relative to the side plates.

To recap one final time, this height of cut adjustment structure was well known in the prior art, even in the Ransomes Boom Mower (except that the Ransomes Boom Mower used a front roller between the side plates rather than a pair of front wheels). Let's go back and look at two height of cut teachings from the Reexamination Request of the 311 patent, namely Smith and the Ransomes Boom Mower.



As set forth at length in the Reexamination Request of the 311 patent, it would further be obvious to one of ordinary skill in the art to adapt the well known height of cut teachings shown above and in Irgens (not pictured) to any of the primary references used against the claims. The Ransomes Boom Mower already has the side plate construction and the basic height of cut structure recited in claim 4 in which the cutting deck moves vertically up and down relative to the side plates to adjust the height of cut. It would have been obvious under 35 USC 103 in the Ransomes Boom Mower merely to replace the front roller (only a corner of which is shown in the above illustration in the upper left hand corner of the picture) with a pair of front wheels as taught by Smith. As so modified, the Ransomes Boom Mower additionally reads on claim 4 of the 530 patent.

In the other references, namely Risboro, Nunes/Lesco and the Wulff Rotary Mower, it would have been obvious in these references to adapt the height of cut teachings of Smith to use the side plate/front wheel/rear roller structure taught therein for adjusting the height of cut. As so additionally modified, any of these references also meets claim 4 of the 530 patent.

Again, more detail on the height of cut topic is set forth in the Reexamination Request of the 311 patent.

#### **The Attached Claim Charts**

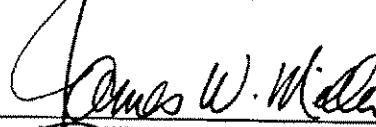
I have attached claim charts hereto for each primary reference applied against the claims, namely the **Risboro RTS Rotary Cutters**, the **Nunes 355 Rotary Mower**, the **Lesco 500D Rotary Mower**, the **Ransomes Boom Mower**, and the **Wulff Rotary Mower**. These charts specifically apply each reference and the necessary secondary references against all of claims 1-5 of the 530 patent.

**Summary**

Clearly, the prior art relied upon in this Request raises substantial new questions of patentability regarding the 530 patent. All the requirements for ex parte reexamination have been met. The PTO should order such reexamination and find that at least claims 1-5 of the 530 patent are unpatentable.

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Respectfully submitted,

  
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<u>530 Patent Claims</u>	Lesco 500D Rotary Gang Mower (The Sebring News Photograph)
<p>1. A gang-type rotary lawn mower comprising</p> <p>a frame supported by front and rear wheels for movement over the ground,</p> <p>a power source which is mounted on the frame and which drives at least two of the wheels,</p> <p>an operator's seat mounted on the frame,</p> <p>a steering system enabling the operator to steer the lawn mower,</p> <p>at least two side-by-side front rotary cutting deck assemblies mounted on the frame in front of the front wheels, the front deck assemblies defining a gap between adjacent front deck assemblies, and</p> <p>at least one rear rotary cutting deck assembly mounted on the frame behind the front deck assemblies and between the front and rear wheels, each rear deck assembly being aligned with a respective gap between adjacent front deck assemblies,</p> <p>each of the front and rear deck assemblies including a single-spindle cutting deck defining a downwardly opening space, a single spindle mounted for rotation about a generally vertical axis within the space, at least one cutting blade mounted on the spindle for rotation therewith, and a rear roller supporting the deck for movement over the ground, the deck having a width such that the roller extends across substantially the entire width of the deck.</p>	<p>the frame of the Lesco 500D traction unit as pictured;</p> <p>the engine that must be is part of the Lesco 500D traction unit to allow it to operate;</p> <p>the seat of the Lesco 500D traction unit as pictured;</p> <p>the steering wheel of the Lesco 500D traction unit as pictured;</p> <p>the pair of front cutting deck assemblies as pictured;</p> <p>Obvious under 35 USC 103 to convert Lesco to a triplex by deleting the two outside rear cutting deck assemblies as taught by the different configurations of the Middlesworth 72R, and when so modified this claim limitation is met by the remaining center rear rotary cutting deck assembly;</p> <p>the Lesco cutting deck assemblies are single-spindled as evidenced by the single hydraulic motors shown thereon and the deck assemblies are rotary deck assemblies as evidenced by their configuration shown in the photos.</p> <p>Obvious under 35 USC 103 to use a rear roller extending substantially across the entire width of said deck to provide better ground following and/or striping as taught by any of the Rear Roller Teachings.</p>

<p>2. A lawn mower as set forth in claim 1 wherein the front deck assemblies are mounted on the frame in front of the front wheels, and the rear deck assembly is mounted on the frame behind the front wheels and in front of the rear wheels.</p>	<p>When Lesco is converted to a triplex pursuant to the combination applied to claim 1, the pair of front units and the rear unit will have the claimed placement.</p>
<p>3. A lawn mower as set forth in claim 1 wherein each deck assembly is connected to the frame by a respective lifting arm operable to lift the associated deck assembly relative to the frame, such that each of the deck assemblies is connected by its own lifting arm to the frame.</p>	<p>The lift arms that must be present on the Lesco 500D traction unit. Some of these lift arms are visible in the photograph.</p>
<p>4. A lawn mower as set forth in claim 1 wherein each of the front and rear deck assemblies includes a pair of laterally-spaced, generally vertically-extending side plates having forward ends, a first front wheel supporting one of the side plates for movement over the ground, and a second front wheel supporting the other of the side plates for movement over the ground, wherein the rear roller extends between the side plates and supports the side plates for movement over the ground, wherein the associated deck is located between the side plates and in front of the roller and is mounted on the side plates such that the height of the deck relative to the ground is adjustable by changing the position of the deck relative to the side plates.</p>	<p>With respect to the combination applied to claim 1, further obvious under 35 USC 103 to support the ground engaging wheels and rear roller between side plates and to adjust the height of cut by moving the cutting deck up and down relative to the side plates, as further taught by any of the Height of Cut Teachings.</p>
<p>5. A lawn mower as set forth in claim 2 wherein each deck assembly also includes a hydraulic motor which is mounted on said deck and which is drivingly connected to said spindle.</p>	<p>the individual hydraulic motors as pictured.</p>

<u>530 Patent Claims</u>	<u>Nunes 355 Rotary Mower</u> (Nunes Model 355 brochure)
<p>1. A gang-type rotary lawn mower comprising</p> <p>a frame supported by front and rear wheels for movement over the ground,</p> <p>a power source which is mounted on the frame and which drives at least two of the wheels,</p> <p>an operator's seat mounted on the frame,</p> <p>a steering system enabling the operator to steer the lawn mower,</p> <p>at least two side-by-side front rotary cutting deck assemblies mounted on the frame in front of the front wheels, the front deck assemblies defining a gap between adjacent front deck assemblies, and</p> <p>at least one rear rotary cutting deck assembly mounted on the frame behind the front deck assemblies and between the front and rear wheels, each rear deck assembly being aligned with a respective gap between adjacent front deck assemblies,</p> <p>each of the front and rear deck assemblies including a single-spindle cutting deck defining a downwardly opening space, a single spindle mounted for rotation about a generally vertical axis within the space, at least one cutting blade mounted on the spindle for rotation therewith, and a rear roller supporting the deck for movement over the ground, the deck having a width such that the roller extends across substantially the entire width of the deck.</p>	<p>the frame of the John Deere 3365 traction unit as pictured;</p> <p>the engine that must be part of the John Deere 3365 traction unit to allow it to operate;</p> <p>the white seat of the John Deere 3365 traction unit as pictured;</p> <p>the steering wheel of the John Deere 3365 traction unit as pictured;</p> <p>the pair of front cutting deck assemblies as pictured;</p> <p>Obvious under 35 USC 103 to convert Nunes to a triplex by deleting the two outside rear cutting deck assemblies as taught by the different configurations of the Middlesworth 72R, and when so modified this claim limitation is met by the remaining center rear rotary cutting deck assembly;</p> <p>the Nunes cutting deck assemblies are single-spindled as evidenced by the single hydraulic motors shown thereon and the deck assemblies are rotary as evidenced by their configuration shown in the photos along with the reference to blades.</p> <p>Obvious under 35 USC 103 to replace the two rear caster wheels with a rear roller extending substantially across the entire width of said deck to provide better ground following and/or striping as taught by any of the Rear Roller Teachings.</p>

<p>2. A lawn mower as set forth in claim 1 wherein the front deck assemblies are mounted on the frame in front of the front wheels, and the rear deck assembly is mounted on the frame behind the front wheels and in front of the rear wheels.</p>	<p>When Nunes is converted to a triplex pursuant to the combination applied to claim 1, the pair of front units and the rear unit will have the claimed placement.</p>
<p>3. A lawn mower as set forth in claim 1 wherein each deck assembly is connected to the frame by a respective lifting arm operable to lift the associated deck assembly relative to the frame, such that each of the deck assemblies is connected by its own lifting arm to the frame.</p>	<p>The lift arms that must be present on the John Deere 3365 traction unit in order to "raise units for transportation, storage and maintenance".</p>
<p>4. A lawn mower as set forth in claim 1 wherein each of the front and rear deck assemblies includes a pair of laterally-spaced, generally vertically-extending side plates having forward ends, a first front wheel supporting one of the side plates for movement over the ground, and a second front wheel supporting the other of the side plates for movement over the ground, wherein the rear roller extends between the side plates and supports the side plates for movement over the ground, wherein the associated deck is located between the side plates and in front of the roller and is mounted on the side plates such that the height of the deck relative to the ground is adjustable by changing the position of the deck relative to the side plates.</p>	<p>With respect to the combination applied to claim 1, further obvious under 35 USC 103 to support the ground engaging wheels and rear roller between side plates and to adjust the height of cut by moving the cutting deck up and down relative to the side plates, as further taught by any of the Height of Cut Teachings.</p>
<p>5. A lawn mower as set forth in claim 2 wherein each deck assembly also includes a hydraulic motor which is mounted on said deck and which is drivingly connected to said spindle.</p>	<p>the individual hydraulic motors as pictured.</p>

<u>530 Patent Claims</u>	<u>Ransomes Boom Mower</u>
<p>1. A gang-type rotary lawn mower comprising</p> <p>a frame supported by front and rear wheels for movement over the ground,</p> <p>a power source which is mounted on the frame and which drives at least two of the wheels,</p> <p>an operator's seat mounted on the frame,</p> <p>a steering system enabling the operator to steer the lawn mower,</p> <p>at least two side-by-side front rotary cutting deck assemblies mounted on the frame in front of the front wheels, the front deck assemblies defining a gap between adjacent front deck assemblies, and</p> <p>at least one rear rotary cutting deck assembly mounted on the frame behind the front deck assemblies and between the front and rear wheels, each rear deck assembly being aligned with a respective gap between adjacent front deck assemblies,</p> <p>each of the front and rear deck assemblies including a single-spindle cutting deck defining a downwardly opening space, a single spindle mounted for rotation about a generally vertical axis within the space, at least one cutting blade mounted on the spindle for rotation therewith, and a rear roller supporting the deck for movement over the ground, the deck having a width such that the roller extends across substantially the entire width of the deck.</p>	<p>the frame of any gang mower, such as Risboro or Ransomes Fairway 250;</p> <p>the engine of any gang mower, such as Risboro or Ransomes Fairway 250;</p> <p>the seat of any gang mower, such as Risboro or Ransomes Fairway 250;</p> <p>the steering wheel of any gang mower, such as Risboro or Ransomes Fairway 250;</p> <p>Obvious under 35 USC 103 to add the Ransomes Boom Mower to such gang mowers in a 3 – 2 fiveplex configuration (the Ransomes Fairway 250) or a 2-1 triplex configuration (Risboro). When so added, any two of the Ransomes Boom Mowers in the front, and any of the rear Ransomes Boom Mowers that will cover the gap between the front Boom Mowers;</p> <p>Ransomes Boom Mower is single spindled. The roller limitation is met by the rear roller of the Ransomes Boom Mower.</p>

<p>2. A lawn mower as set forth in claim 1 wherein the front deck assemblies are mounted on the frame in front of the front wheels, and the rear deck assembly is mounted on the frame behind the front wheels and in front of the rear wheels.</p>	<p>This will be met when the Ransomes Boom Mowers are disposed in the 3-2 configuration shown in the Ransomes Fairway 250 or in the 2-1 configuration shown in Risboro.</p>
<p>3. A lawn mower as set forth in claim 1 wherein each deck assembly is connected to the frame by a respective lifting arm operable to lift the associated deck assembly relative to the frame, such that each of the deck assemblies is connected by its own lifting arm to the frame.</p>	<p>the lift arms of any gang mower, such as Risboro or Ransomes Fairway 250;</p>
<p>4. A lawn mower as set forth in claim 1 wherein each of the front and rear deck assemblies includes a pair of laterally-spaced, generally vertically-extending side plates having forward ends, a first front wheel supporting one of the side plates for movement over the ground, and a second front wheel supporting the other of the side plates for movement over the ground, wherein the rear roller extends between the side plates and supports the side plates for movement over the ground, wherein the associated deck is located between the side plates and in front of the roller and is mounted on the side plates such that the height of the deck relative to the ground is adjustable by changing the position of the deck relative to the side plates.</p>	<p>With respect to the combination applied to claim 1, further obvious under 35 USC 103 in view of Smith to replace the front roller in the Ransomes Boom Mower with a pair of front wheels carried adjacent the forward ends of the existing Ransomes side plates.</p>
<p>5. A lawn mower as set forth in claim 2 wherein each deck assembly also includes a hydraulic motor which is mounted on said deck and which is drivingly connected to said spindle.</p>	<p>With respect to the combination applied to claim 1, further obvious under 35 USC 103 in view of Risboro, Nunes, Lesco or Ransomes Fairway 250 to individually power Ransomes Boom Mowers with hydraulic motors.</p>

<u>530 Patent Claims</u>	<u>Risboro RTS Rotary Cutter (Rotary Cutterhead General Information)</u>
<p>1. A gang-type rotary lawn mower comprising</p> <p>a frame supported by front and rear wheels for movement over the ground,</p> <p>a power source which is mounted on the frame and which drives at least two of the wheels,</p> <p>an operator's seat mounted on the frame,</p> <p>a steering system enabling the operator to steer the lawn mower,</p> <p>at least two side-by-side front rotary cutting deck assemblies mounted on the frame in front of the front wheels, the front deck assemblies defining a gap between adjacent front deck assemblies, and</p> <p>at least one rear rotary cutting deck assembly mounted on the frame behind the front deck assemblies and between the front and rear wheels, each rear deck assembly being aligned with a respective gap between adjacent front deck assemblies,</p> <p>each of the front and rear deck assemblies including a single-spindle cutting deck defining a downwardly opening space, a single spindle mounted for rotation about a generally vertical axis within the space, at least one cutting blade mounted on the spindle for rotation therewith, and a rear roller supporting the deck for movement over the ground, the deck having a width such that the roller extends across substantially the entire width of the deck.</p>	<p>the frame of Beaver/Hayter T24 shown on page 2 and the depicted wheels;</p> <p>the "engine" described at #3 on page 2;</p> <p>the seat of Beaver/Hayter T24 shown on page 2;</p> <p>the steering wheel of Beaver/Hayter T24 shown on page 2;</p> <p>both of the plural "front units" described on pages 2 - 4;</p> <p>the "centre unit" described on page 4;</p> <p>Obvious under 35 USC 103 to change the RTS rotary cutting deck assemblies from a triple spindle/blade configuration to a single spindle/blade configuration as taught by any one or all of the Single Spindle Teachings, but particularly by Torras.</p> <p>the roller limitation is met by the rear roller of the RTS mower.</p>

<p>2. A lawn mower as set forth in claim 1 wherein the front deck assemblies are mounted on the frame in front of the front wheels, and the rear deck assembly is mounted on the frame behind the front wheels and in front of the rear wheels.</p>	<p>this is the placement of the Risboro front and centre units.</p>
<p>3. A lawn mower as set forth in claim 1 wherein each deck assembly is connected to the frame by a respective lifting arm operable to lift the associated deck assembly relative to the frame, such that each of the deck assemblies is connected by its own lifting arm to the frame.</p>	<p>the "each front lift arm" described on the second paragraph, page 3, in conjunction with the fitting of the front units; and the "lift arm" described in the sixth paragraph, page 4, in conjunction with the fitting of the centre unit.</p>
<p>4. A lawn mower as set forth in claim 1 wherein each of the front and rear deck assemblies includes a pair of laterally-spaced, generally vertically-extending side plates having forward ends, a first front wheel supporting one of the side plates for movement over the ground, and a second front wheel supporting the other of the side plates for movement over the ground, wherein the rear roller extends between the side plates and supports the side plates for movement over the ground, wherein the associated deck is located between the side plates and in front of the roller and is mounted on the side plates such that the height of the deck relative to the ground is adjustable by changing the position of the deck relative to the side plates.</p>	<p>With respect to the combination applied to claim 1, further obvious under 35 USC 103 to support the cutting decks by using side plates, front wheels and the rear roller as taught by Smith or Irgens, and by moving the deck up and down relative to the side plates as further taught by Smith or Irgens.</p>
<p>5. A lawn mower as set forth in claim 2 wherein each deck assembly also includes a hydraulic motor which is mounted on said deck and which is drivingly connected to said spindle.</p>	<p>the hydraulic motor shown on page 2 for each cutting deck assembly.</p>

<u>530 Patent Claims</u>	<u>Wulff Rotary Mower</u>
<p>1. A gang-type rotary lawn mower comprising</p> <p>a frame supported by front and rear wheels for movement over the ground,</p> <p>a power source which is mounted on the frame and which drives at least two of the wheels,</p> <p>an operator's seat mounted on the frame,</p> <p>a steering system enabling the operator to steer the lawn mower,</p> <p>at least two side-by-side front rotary cutting deck assemblies mounted on the frame in front of the front wheels, the front deck assemblies defining a gap between adjacent front deck assemblies, and</p> <p>at least one rear rotary cutting deck assembly mounted on the frame behind the front deck assemblies and between the front and rear wheels, each rear deck assembly being aligned with a respective gap between adjacent front deck assemblies,</p> <p>each of the front and rear deck assemblies including a single-spindle cutting deck defining a downwardly opening space, a single spindle mounted for rotation about a generally vertical axis within the space, at least one cutting blade mounted on the spindle for rotation therewith, and a rear roller supporting the deck for movement over the ground, the deck having a width such that the roller extends across substantially the entire width of the deck.</p>	<p>the frame of any gang mower, such as Risboro or Ransomes Fairway 250;</p> <p>the engine of any gang mower, such as Risboro or Ransomes Fairway 250;</p> <p>the seat of any gang mower, such as Risboro or Ransomes Fairway 250;</p> <p>the steering wheel of any gang mower, such as Risboro or Ransomes Fairway 250;</p> <p>Obvious under 35 USC 103 to mount the Wulff Rotary Mower to such gang mowers in a 3 – 2 fiveplex configuration (the Ransomes Fairway 250) or a 2-1 triplex configuration (Risboro). When so mounted, any two of the Wulff Rotary Mowers in the front, and any of the rear Wulff Rotary Mowers that will cover the gap between the front Boom Mowers;</p> <p>Further obvious under 35 USC 103 to change the Wulff Rotary Mower from a dual spindle/blade configuration to a single spindle/blade configuration as taught by any of the Single Spindle Teachings.</p> <p>The roller limitation is met by the rear roller of the Wulff Rotary Mower.</p>

<p>2. A lawn mower as set forth in claim 1 wherein the front deck assemblies are mounted on the frame in front of the front wheels, and the rear deck assembly is mounted on the frame behind the front wheels and in front of the rear wheels.</p>	<p>This will be met when the Wulff Rotary Mowers are disposed in the 3-2 configuration shown in the Ransomes Fairway 250 or in the 2-1 configuration shown in Risboro.</p>
<p>3. A lawn mower as set forth in claim 1 wherein each deck assembly is connected to the frame by a respective lifting arm operable to lift the associated deck assembly relative to the frame, such that each of the deck assemblies is connected by its own lifting arm to the frame.</p>	<p>the lift arms of any gang mower, such as Risboro or Ransomes Fairway 250;</p>
<p>4. A lawn mower as set forth in claim 1 wherein each of the front and rear deck assemblies includes a pair of laterally-spaced, generally vertically-extending side plates having forward ends, a first front wheel supporting one of the side plates for movement over the ground, and a second front wheel supporting the other of the side plates for movement over the ground, wherein the rear roller extends between the side plates and supports the side plates for movement over the ground, wherein the associated deck is located between the side plates and in front of the roller and is mounted on the side plates such that the height of the deck relative to the ground is adjustable by changing the position of the deck relative to the side plates.</p>	<p>With respect to the combination applied to claim 1, further obvious under 35 USC 103 to support the cutting decks by using side plates, front wheels and the rear roller as taught by Smith or Irgens, and by moving the deck up and down relative to the side plates as further taught by Smith or Irgens.</p>
<p>5. A lawn mower as set forth in claim 2 wherein each deck assembly also includes a hydraulic motor which is mounted on said deck and which is drivingly connected to said spindle.</p>	<p>the hydraulic motor shown on each Wulff Rotary Mower.</p>